

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application.

Claims 1-64 (Cancelled)

65. (New) An apparatus comprising:
- a first compartment including an endothermic hydrogen generator;
 - a second compartment including an exothermic hydrogen generator, the second compartment to transfer a net amount of heat to the first compartment; and
 - a fuel cell coupled to the generators to receive hydrogen and to generate electrical power.
66. (New) The apparatus of claim 65, wherein the second compartment is inside the first compartment.
67. (New) The apparatus of claim 66, further comprising a substance enclosing the second compartment having a high heat conductance.
68. (New) The apparatus of claim 67, further comprising a material enclosing the first compartment having a low thermal conductivity.
69. (New) The apparatus of claim 65, further comprising a conductive fin extending into either the first compartment, the second compartment, or both the first and the second compartments.

70. (New) The apparatus of claim 65, further comprising a tube to include a heat conducting liquid extending through the first compartment, the second compartment, or both the first and the second compartments.
71. (New) The apparatus of claim 70, further comprising a projection attached to the tube to increase efficiency of heat transfer.
72. (New) The apparatus of claim 65, wherein a source of hydrogen of the endothermic hydrogen generator is different than a source of hydrogen of the exothermic hydrogen generator.
73. (New) The apparatus of claim 72, wherein the exothermic hydrogen generator comprises an exothermic hydrogen generator that is selected from the group consisting of a borohydride solution exposed to a catalyst, a solid lithium aluminum tetrahydride, a hydride exposed to water, a partial oxidation hydrocarbon reformer, and combinations thereof.
74. (New) The apparatus of claim 73, wherein the endothermic hydrogen generator comprises an endothermic hydrogen generator that is selected from the group consisting of one or more metal hydrides, one or more metal alloy hydrides, a carbon nanotube system, a compressed hydrogen gas, a liquid hydrogen, a steam hydrocarbon reformer, and combinations thereof.
75. (New) The apparatus of claim 74:
- wherein the exothermic hydrogen generator comprises an aqueous solution of sodium borohydride and a catalyst; and
- wherein the endothermic hydrogen generator comprises one or more metal hydrides.

76. (New) The apparatus of claim 65, wherein heat released by the exothermic hydrogen generator is approximately balanced by heat absorbed by the endothermic hydrogen generator.
77. (New) The apparatus of claim 65, further comprising:
- a first port connected to the first compartment and to the fuel cell; and
- a second port connected to the second compartment and to the fuel cell.
78. (New) The apparatus of claim 65, further comprising an electrical heater to heat the endothermic hydrogen generator.
79. (New) The apparatus of claim 65, wherein the fuel cell comprises an exothermic fuel cell that is thermally coupled with the endothermic hydrogen generator to provide heat to the endothermic hydrogen generator.
80. (New) The apparatus of claim 65:
- wherein the fuel cell is designed to operate at near ambient temperature; and
- further comprising a portable electronic device coupled to the fuel cell to receive the electrical power.
81. (New) The apparatus of claim 65, wherein the portable electronic device comprises one selected from a laptop and a cell phone.
82. (New) The apparatus of claim 65, wherein the second compartment is operably coupled with the first compartment.
83. (New) An apparatus comprising:
- an endothermic compartment including a hydrogen generator;

an exothermic compartment including a hydrogen generator to transfer heat to the endothermic compartment; and

a fuel cell operably coupled to the hydrogen generators to receive hydrogen and to generate electrical power.

84. (New) The apparatus of claim 83, wherein the exothermic compartment is inside the endothermic compartment.

85. (New) The apparatus of claim 84, further comprising:

a substance enclosing the exothermic compartment having a high heat conductance; and

a material enclosing the endothermic compartment having a low thermal conductivity.

86. (New) The apparatus of claim 83, further comprising a conductive fin extending into either the endothermic compartment, the exothermic compartment, or both the endothermic and the exothermic compartments.

87. (New) The apparatus of claim 83, further comprising a tube to include a heat conducting liquid extending through the endothermic compartment, the exothermic compartment, or both the endothermic and the exothermic compartments.

88. (New) The apparatus of claim 83, wherein the hydrogen generator of the endothermic compartment is different than the hydrogen generator of the exothermic compartment.

89. (New) The apparatus of claim 88, wherein the hydrogen generator of the exothermic compartment comprises one or more selected from the group consisting of a borohydride solution exposed to a catalyst, a solid lithium aluminum tetrahydride, a hydride exposed to water, a partial oxidation hydrocarbon reformer, and combinations thereof.
90. (New) The apparatus of claim 89, wherein the hydrogen generator of the endothermic compartment comprises one or more selected from the group consisting of one or more metal hydrides, one or more metal alloy hydrides, a carbon nanotube system, a compressed hydrogen gas, a liquid hydrogen, a steam hydrocarbon reformer, and combinations thereof.
91. (New) The apparatus of claim 83, wherein heat released by the exothermic compartment is approximately balanced by heat absorbed by the endothermic compartment.
92. (New) The apparatus of claim 83, further comprising:

a first port connected to the exothermic compartment and to the fuel cell; and

a second port connected to the endothermic compartment and to the fuel cell.
93. (New) The apparatus of claim 83, further comprising an electrical heater to heat the hydrogen generator of the endothermic compartment.
94. (New) The apparatus of claim 83, wherein the fuel cell comprises an exothermic fuel cell that is thermally coupled with the hydrogen generator of the endothermic compartment.

95. (New) The apparatus of claim 83:

wherein the fuel cell is designed to operate at near ambient temperature; and

further comprising a portable electronic device coupled to the fuel cell to receive the electrical power.

96. (New) The apparatus of claim 83, wherein the exothermic compartment is operably coupled with the endothermic compartment.

97. (New) The apparatus of claim 83, wherein the exothermic compartment is to transfer a net amount of heat to the endothermic compartment.